

REMARKS

Reconsideration and timely allowance of the pending claims, in view of the above amendments and following remarks, are requested.

By this amendment, claims 1, 3-8, 10, 15-18, 21 and 24-26. Claims 11-14, 19, 20 and 22 have been cancelled without prejudice or disclaimer to the subject matter therein. Applicant reserves the right to pursue the subject matter of the cancelled claims in a divisional application. Claims 28-34 have been newly added to provide additional dependent claim support. Support for new claims 28-34 can be found throughout the original description. No new matter has been added. Currently, claims 1, 3-8, 10, 15-18, 21 and 23-34 are pending. Since this Amendment is being presented together with a Request for Continued Examination, entry of this Amendment is respectfully requested.

Claims 1, 5-10, 15 and 26-27 stand rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,828,772 B1 to Hofer *et al.* (“Hofer”). Claims 1, 5-6, 8, 10, 15, 18, 21 and 23-27 stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 6,404,483 to Segers *et al.* (“Segers”). Applicants respectfully traverse the prior art rejections, under 35 U.S.C. §102(e) and §102(b) for the following reasons.

Claim 1 recites a lithographic support system comprising, *inter alia*, “a flexible compliant structure configured to absorb a force created by a collision between said object and said clamp, the flexible compliant structure being provided at least between the rod and the support frame.” Neither of the cited portions of Hofer nor Segers discloses, either expressly or inherently, all the aspects recited in claim 1.

The cited portions of Hofer disclose a hollow flipper shaft 20 and a mounting head 90 which “locks the flipper shaft 20 to the wafer holding structure 10.” *See*, column 6, lines 30-33 of Hofer. In particular, the cited portions of Hofer disclose a wedge assembly 50 including a rubber material to frictionally engage and hold the wafer within the holding structure 10. *See*, column 6, lines 9-11 of Hofer. Moreover, the cited portions of Hofer disclose the wafer holding structure 10 that includes two gripper arms 60 that are pulled together by tension springs 70. When the wafer is held by the holding structure 10, the wafer is forced upward along an incline area on the wedge assemblies 50, 55 into the wedge slots on the wedge assemblies 50, 55. The pressure of the gripper arm 60 provided by the tension springs 70 and the slots in the wedge assemblies 50, 55 work together to secure the wafer within the wafer holding structure 10.

The cited portions of Segers disclose a pick-up hand 133 that is provided on the end of arm 131, and further discusses two fingers 134 which are inserted underneath a wafer w, to pick-up the wafer w. The pick-up hand 133 carries coupling half 135a, which mates with a corresponding coupling half 135(b), on the pre-aligner 2. The coupling (135a, 135b) is used to ensure that the pick-up hand 133 is accurately positioned relative to the pre-aligner 2 when the wafer w is picked up. *See*, column 7, lines 6-18 and Figs. 5a-5c of Segers. The coupling half 135a of Segers is configured to mate with corresponding coupling half 135b on the pre-aligner 2 to ensure that the pick-up hand 133 is accurately positioned relative to the pre-aligner 2 when the wafer W is picked up.

With this said, neither of the cited portions of Hofer nor Segers discloses at least the aspect of “a flexible compliant structure configured to absorb forces created by a collision between said object and said clamp, the flexible compliant structure being provided at least between the rod and the support frame,” as recited in claim 1.

The wedge assembly 50 of Hofer (identified by the Examiner as the “compliant structure” of claim 1) is used frictionally to hold the wafer within the arms 60 (identified by the Examiner as the “clamp” of claim 1) holding structure 10. There is nothing within the cited portions of Hofer to teach or suggest that the wedge assembly 50 is flexible and configured to absorb a force created by a collision between the wafer 40 (identified by the Examiner as the “substrate” of claim 1) and the arms 60. As a matter of fact, no collision arises between the wafer 40 and the arms 60 in Hofer since the wedge assembly 50 is provided between the arms 60 and the wafer 40.

Moreover, the cited portions of Segers teach that the rigid connection between the pick-up hand 133 with two fingers 140 (identified by the Examiner as the “clamp” of claim 1) and the arm 131 is configured to allow a certain amount of movement between them. There is nothing within the cited portions of Segers to teach or suggest that the coupling part 135a (identified by the Office Action as the “compliant structure” of claim 1) is flexible and configured to absorb a force created by a collision between said the two fingers 140 and said the wafer W (identified by the Office Action as the “substrate” of claim 1). There simply is none.

Therefore, the cited portions of Hofer and Segers fail to anticipate claim 1 *at least* because they fail to disclose all the features of claim 1. Claims 3-8, 10 and 23-25 are patentable over the cited portions of Hofer and Segers *at least* by virtue of their dependency from claim 1, and for the additional features recited therein.

Furthermore, because independent claims 15, 18, 21 and 26 recite similar patentable features as noted above, with respect to claim 1, claims 15, 18, 21 and 26 are also patentable for at least the reasons submitted relative to claim 1.

For example, claim 15 is patentable over the cited portions of Hofer and Segers at least because this claim recites a lithographic robot comprising, *inter alia*, “a flexible compliant structure configured to absorb a force created by a collision between said object and said robotic arm, the flexible compliant structure being provided at least between the rod and the support frame.”

Claim 18 is patentable over the cited portions of Hofer and Segers at least because this claim recites a lithographic apparatus comprising, *inter alia*, “a support system that holds and moves one of said substrate, said patterning device, and an object, in which said support system comprises .... a flexible compliant structure configured to absorb a force created by a collision between said substrate, said patterning device, or said object and said clamp, the flexible compliant structure being provided at least between the rod and the support frame.”

Claim 21 is patentable over the cited portions of Hofer and Segers at least because this claim recites a device manufacturing method, comprising, *inter alia*, “providing a substrate via a support system, said supporting system comprising a rod coupled to a support frame that is provided with a clamp structure that clamps said substrate, said supporting system configured to hold and move said substrate and absorb a force created by a collision between said substrate and said clamping structure by employing a flexible compliant structure provided at least between the rod and the support frame.”

Claim 26 is patentable over the cited portions of Hofer and Segers at least because this claim recites a lithographic support system comprising, *inter alia*, “a flexible compliant structure configured to absorb a force created by a collision between the object and the clamp during transport of the object between a first and a second support, the first and the second support configured to support the object, the flexible compliant structure provided on the rod or the support frame so as to be in a contactless relationship with the object.”

Additionally, because claims 16-17 depend from claim 15 and claim 27 depends from 26, claims 16-17 and 27 are also patentable at least by virtue of their dependency from claims 15 and 27, respectively, as well as for their additional recitations.

Claims 28-34 are newly added to define additional subject matter that is novel and non-obvious. Claims 28-34 are patentable over the art of record at least by virtue of their dependency from claim 1, 15, 18, 21 or 26, respectively, and for the additional features recited therein.

All matters having been addressed and in view of the foregoing, applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application and immediate allowance of all pending claims.

Applicants counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains this an issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975, under order number 081468-0308853.

The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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